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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/530,679

07/14/2005

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EXAMINER

STULII, VERA

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

01/27/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/530,679	Applicant(s) KAGEYAMA ET AL.	
	Examiner VERA STULII	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8,21-32 and 39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8,21-32 and 39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :10/31/2008, 02/16/2006, 04/08/2005.

DETAILED ACTION

Election/Restrictions

Claims 9-20 and 33-38 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on November 5, 2008.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-8, 21-25, 29, 32 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakahara et al (WO 9,952,841) (US 6,331,320 is relied upon as a translation of WO 9,952,841).

In regard to claim 1 and 21, Nakahara discloses a method of manufacturing a plant finished product, comprising the step of processing a plant or a processed material thereof with high-temperature and high-pressure liquid, gas, or fluid under conditions where an oxygen concentration is 0 to 1 µg/mL. In particular, Nakahara et al disclose that “[i]t is well known that substances can exist in three states: as a solid, liquid or gas. If temperature and pressure are gradually increased, starting in a state in which a gas and a liquid mingle, when a certain pressure and a certain temperature (i.e., critical point) are exceeded, there exists a range in which the boundary surface between the

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gas and the liquid disappears, and the gas and liquid integrate as an inseparable entity to form a fluid state. Such a fluid is called a supercritical fluid, which is a high-density fluid having properties intermediate between gas and liquid. That is, this fluid, like a liquid, dissolves various substances, and has high fluidity like a gas”(Col. 3 lines 13-26).

In regard to claims 1, 4, 5, 32 and 39, regarding oxygen concentration recitation, Nakahara et al disclose that “treatment is preferably performed in an anaerobic state. For this purpose, it is advisable to evacuate the inside of the container, or fully purge the inside of the container and water with an inert gas such as nitrogen or argon, followed by closing the container” (Col. 4 lines 10-15). Since, Nakahara et al disclose anaerobic state meaning absence of oxygen, therefore Nakahara et al meets the oxygen concentration limitation.

In regard to claims 2, 22 and 23, Nakahara disclose the method of manufacturing a plant finished product, wherein the plant or the processed material thereof is processed for 1 to 3,600 seconds, for example 120 seconds or 1800 seconds (see col. 4 lines 22-23) with liquid, gas, or fluid having a temperature of 140 to 500°C, for example at a temperature of about 374 to 500°C (see col. 4 lines 16-18) and a pressure of 0.1 to 100 MPa, for example from 22.3 to 30.4 MPa (see col. 4 lines 16-18), under conditions where an oxygen concentration is 0 to 1 µg /mL.

In regard to claim 6, Nakahara discloses inert gas (Col. 4 lines 14).

In regard to claims 7 and 21, Nakahara disclose a plant containing lignin (Col. 4 lines 61-62).

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In regard to claim 8, Nakahara disclose that the lignin-containing plant or the processed material thereof is at least one selected from grains, trees, teas, etc. (Col. 8 lines 58-67).

In regard to claim 21, Nakahara further disclose vanillin(Col. 2 line 49).

In regard to claims 24 and 25, Nakahara further disclose composition containing vanillin is a raw material of food, drink or liqueur (Col. 1 lines 33-35).

In regard to claim 29, Nakahara further disclose exposing a product to a low pressure (Col. 4 lines 34-38).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 3, 28, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakahara et al (WO 9,952,841) (US 6,331,320 is relied upon as a translation of WO 9,952,841).

Nakahara is silent regarding temperature range as disclosed in claim 3. However, Nakahara discloses employing supercritical or subcritical water, which requires lower temperature range than supercritical water. In any case, one of ordinary skill in the art would have been motivated to modify temperatures, depending on the particular solvent used (water in case of Nakahara et al), pressure, and other conditions.

In regard to claim 28, it is noted that regarding the vanillin content recitation, it is noted that although the references do not specifically disclose every possible quantification or characteristic of its product, such as vanillin content, this characteristic would have been expected to be in the claimed range absent any clear and convincing evidence and/or arguments to the contrary. The reference discloses the same starting materials and methods as instantly (both broadly and more specifically) claimed, and thus one of ordinary skill in the art would recognize that the vanillin content, among many other characteristics of the product obtained by referenced method, would have been an inherent result of the process disclosed therein. The Patent Office does not possess the facilities to make and test the referenced method and product obtained by such method, and as reasonable reading of the teachings of the reference has been applied to establish the case of obviousness, the burden thus shifts to applicant to demonstrate otherwise.

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Regarding claims 30 and 31 reciting employing extruder and particular shape of the vanillin product, it is noted that vanillin production using extruders in order to produce particular shape of the vanillin product was well known in the art. Therefore, one of ordinary skill in the art would have been motivated to use extruder in order to produce particular shape of the vanillin product.

Claims 26 and 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakahara et al (WO 9,952,841) (US 6,331,320 is relied upon as a translation of WO 9,952,841) and further in view of Ono et al (US 5,460,836).

In regard to claims 26 and 27, Nakahara et al do not disclose malt as a plant material. Ono et al disclose a malt for brewing beer prepared by removing lipids by using subcritical or supercritical carbon dioxide (Abstract). In the beer obtained by using the malt prepared by the method of the present invention, wort clarity is good, filtration becomes rapid, and filtration efficiency is improved. Also, the obtained beer has good foam head retention, good foam lacing, a refreshingly clean taste and good flavor stability(Abstract). Since Ono et al discloses superior properties of beer obtained by using malt that has been treated by subcritical or supercritical carbon dioxide, one of ordinary skill in the art would have been motivated to modify Nakahara et al to employ malt as a raw material in subcritical or supercritical fluid treatment for the benefits as disclosed by Ono et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VERA STULII whose telephone number is (571)272-3221. The examiner can normally be reached on 7:00 am-3:30 pm, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JENNIFER MCNEIL can be reached on (571)272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steve Weinstein/
Primary Examiner, Art Unit 1794

VS